

If several different types of PPE are worn together, make sure they are compatible. If PPE does not fit properly, it can make the difference between being safely covered or dangerously exposed. It may not provide the level of protection desired and may discourage employee use.

NCDOL requires that many categories of PPE meet or be equivalent to standards developed by the American National Standards Institute (ANSI). ANSI has been preparing safety standards since the 1920s, when the first safety standard was approved to protect the heads and eyes of industrial workers. Employers who need to provide PPE in the categories listed below must make certain that any new equipment procured meets the cited ANSI standard. The employer may also demonstrate that the protective devices in use are at least as effective as PPE constructed in accordance with one of the listed consensus standards. Employers should inform employees who provide their own PPE of the employer's selection decisions and ensure that any employee-owned PPE used in the workplace conforms to the employer's criteria, based on the hazard assessment, NCDOL requirements and ANSI standards. NCDOL requires PPE to meet the following ANSI standards:

- Eye and Face Protection: ANSI Z87.1-2003, ANSI Z87.1-1989 (R-1998) or ANSI Z87.1-1989 (the American National Standard Practice for Occupational and Educational Eye and Face Protection) for the general and maritime industries. The construction industry requires eye and face protection equipment to meet the requirements specified in ANSI Z87.1-1968, Practice for Occupational and Educational Eye and Face Protection.
- Head Protection: ANSI Z89.1-2003, ANSI Z89.1-1997 (the American National Standard for Industrial Head Protection) or ANSI Z89.1-1986 (American National Standard for Personnel Protection—Protective Headwear for Industrial Workers—Requirements) for the general and maritime industries. The construction industry requires helmets used for the protection of employees against impact and penetration of falling and flying objects to meet the specifications contained in ANSI Z89.1-1969 (Safety Requirements for Industrial Head Protection). Helmets for the head protection of employees exposed to high voltage electrical shock and burns must meet the specifications contained in ANSI Z89.2-1971.
- Foot Protection: ASTM F-2412-2005 (Standard Test Methods for Foot Protection) and ASTM F-2413-2005 (Standard Specification for Performance Requirements for Protective Footwear), ANSI Z41-1999 or ANSI Z41-1991 (American National Standard for Personal Protection—Protective Footwear) for the general and maritime industries. Protective footwear used in the construction industry must meet the requirements and specifications in American National Standard for Men's Safety-Toe Footwear, Z41.1-1967.*

For hand protection, there is no ANSI standard for gloves but the standard requires that selection be based upon the tasks to be performed and the performance and construction characteristics of the glove material. For protection against chemicals, glove selection must be based on the chemicals encountered, the chemical resistance and the physical properties of the glove material.

Training Employees in the Proper Use of Personal Protective Equipment

Employers are required to train each employee who must use PPE. Employees must be trained to know at least the following:

- When PPE is necessary.
- What PPE is necessary.
- How to properly put on, take off, adjust and wear the PPE.
- The limitations of the PPE.
- Proper care, maintenance, useful life and disposal of PPE.

Employers must make sure that all employees demonstrate an understanding of the PPE training as well as the ability to wear and use PPE properly before they are allowed to perform work requiring the use of the PPE. If an employer believes that a previously trained employee is not demonstrating the proper understanding and skill level in the use of

*Note: ANSI Z41-1991 replaced ANSI Z41.1-1967. ANSI Z41-1991 was then superseded by ASTM F2412-05, Standard Test Methods for Foot Protection, and F2413-05, Standard Specification for Performance Requirements for Foot Protection. For the construction industry, NCDOL will accept foot protection designed in accordance with the ASTM standards, current ANSI standards (Z41-1999 or 1991) as well as existing foot protection designed in accordance with ANSI Z41.1 as stated above.